



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2014-0209]

Nonmetallic Thermal Insulation for Austenitic Stainless Steel

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment draft regulatory guide (DG), DG-1312, “Nonmetallic Thermal Insulation for Austenitic Stainless Steel,” also known as Regulatory Guide (RG) 1.36. The NRC is proposing to revise the guidance to reflect the most current versions of voluntary consensus standards since the initial publication of RG 1.36 in February 1973. The guide describes methods and procedures that the staff of the NRC considers acceptable when selecting and using nonmetallic thermal insulation in the stainless steel portions of the reactor coolant pressure boundary and other systems, in order to minimize any contamination that could promote stress-corrosion cracking. This RG applies to light-water-cooled reactors.

DATES: Submit comments by **[INSERT DATE 30 DAYS FROM THE DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date. Although a time limit is given, comments and

suggestions in connection with items for inclusion in guides currently being developed or improvements in all published guides are encouraged at any time.

ADDRESSES: You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specific subject):

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2014-0209. Address questions about NRC dockets to Carol Gallagher; telephone: 301-287-3422; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **Mail comments to:** Cindy Bladey, Office of Administration, Mail Stop: 3WFN-06-A44M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: David W. Alley, Office of Nuclear Reactor Regulation, telephone: 301-415-2178, email: Dave.Alley@nrc.gov, or Rick Jervey, Office of Nuclear Regulatory Research, telephone: 301-251-7404, email: Richard.Jervey@nrc.gov. Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments.

A. Obtaining Information.

Please refer to Docket ID NRC-2014-0209 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- **Federal rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2014-0209.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**
You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in the SUPPLEMENTARY INFORMATION section.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments.

Please include Docket ID NRC-2014-0209 in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <http://www.regulations.gov> as well as enter the comment submissions into ADAMS, and the NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Additional Information.

The NRC is issuing for public comment a draft guide in the NRC's "Regulatory Guide" series. This series was developed to describe and make available to the public such information as methods that are acceptable to the NRC staff for implementing specific parts of the NRC's regulations, techniques that the staff uses in evaluating specific problems or postulated accidents, and data that the staff needs in its review of applications for permits and licenses.

The DG, entitled, “Nonmetallic Thermal Insulation for Austenitic Stainless Steel,” is temporarily identified by its task number, DG-1312. This DG is a proposed revision 1 of RG 1.36. The RG describes methods and procedures that the staff of the NRC considers acceptable when selecting and using nonmetallic thermal insulation in the stainless steel portions of the reactor coolant pressure boundary and other systems, to minimize any contamination that could promote stress-corrosion cracking. This guide applies to light-water-cooled reactors. This guidance has been revised to update to the current industry standards which have changed since the initial publication of RG 1.36 in February 1973. The changes update the related standards to those currently available for use. Each type of insulating material should meet the requirements of American Society for Testing and Materials (ASTM) C795, “Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel,” including, but not limited to, a preproduction corrosion test in accordance with ASTM C692, “Test Method for Evaluating the Influence of Thermal Insulation on External Stress Corrosion Cracking Tendency of Austenitic Stainless Steel,” and a chemical analysis acceptance test for each lot of material in accordance with ASTM C871, “Test Method for Chemical Analysis of Thermal Insulation Materials for Leachable Chloride, Fluoride, Silicate and Sodium Ions.”

III. Backfitting and Issue Finality.

Draft regulatory guide-1312/Regulatory Guide 1.36, Revision 1, if finalized, would provide guidance on one acceptable way of meeting the requirements in GDC 1 and GDC 14 with respect to stress-corrosion cracking in austenitic steel portions of the reactor coolant pressure boundary which are caused in part by contact with nonmetallic thermal insulation. This DG, if finalized, would not constitute backfitting as defined in § 50.109 of Title 10 of the *Code of*

Federal Regulations (10 CFR) (the Backfit Rule), and is not otherwise inconsistent with the issue finality provisions in 10 CFR part 52, “Licenses, Certifications and Approvals for Nuclear Power Plants.” The NRC’s position is based upon the following considerations.

Existing licensees, part 50 construction permit holders and part 50 operating license holders, and applicants of final design certification rules would not be required to comply with the positions set forth in DG-1312/RG 1.36, Revision 1, if finalized, unless the construction permit or an operating license holder makes a voluntary change to its licensing basis with respect to non-metallic thermal insulation in contact with austenitic stainless steel, and the NRC determines that the safety review must include consideration of the matters addressed in this draft regulatory guide.

Existing design certification rules would not be required to be amended to comply with the positions set forth in DG-1312 unless the NRC addresses the issue finality provisions in 10 CFR 52.63(a).

Existing combined license holders (referencing the AP1000 design certification rule in 10 CFR part 52, Appendix D) would not be required to comply with the positions set forth in DG-1312 unless the NRC addresses the issue finality provisions in 10 CFR 52.63(a).

Draft Regulatory Guide-1312 may be applied to current applications for operating licenses, combined licenses, and certified design rules docketed by the NRC as of the date of issuance of the revision to the regulatory guide, as well as future applications submitted after the issuance of the revised regulatory guide. Such action would not constitute backfitting as defined in § 50.109(a)(1) or be otherwise inconsistent with the applicable issue finality provision in 10 CFR part 52. Neither the Backfit Rule nor the issue finality provisions under part 52 – with certain exclusions discussed below – were intended to every NRC action which substantially changes the expectations of current and future applicants.

The exceptions to the general principle are applicable whenever a combined license

applicant references a part 52 license (e.g., an early site permit) and/or NRC regulatory approval (e.g., a design certification rule) with specified issue finality provisions. The NRC does not, at this time, intend to impose the positions represented in the DG, if finalized, on combined license applicants in a manner that is inconsistent with any issue finality provisions. If, in the future, the NRC seeks to impose a position in the DG, if finalized, in a manner which does not provide issue finality as described in the applicable issue finality provision, then the NRC must address the criteria for avoiding issue finality as described applicable issue finality provision.

Dated at Rockville, Maryland, this 30th day of September, 2014.

For the Nuclear Regulatory Commission.

Harriet Karagiannis, Acting Chief,
Regulatory Guidance and Generic Issues Branch,
Division of Engineering,
Office of Nuclear Regulatory Research.

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